

TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS

PCT

RAPPORT PRÉLIMINAIRE INTERNATIONAL SUR LA BREVETABILITÉ

(chapitre I du Traité de coopération en matière de brevets)

(règle 44bis du PCT)

Référence du dossier du déposant ou du mandataire R8652WO	POUR SUITE À DONNER Voir le point 4 ci-dessous	
Demande internationale no. PCT/FR2004/001963	Date du dépôt international (<i>jour/mois/année</i>) 22 July 2004 (22.07.2004)	Date de priorité (<i>jour/mois/année</i>) 04 August 2003 (04.08.2003)
Classification internationale des brevets (8 ^e édition, sauf indication d'une #dition ant#rieure) Voir les informations pertinentes dans le formulaire PCT/ISA/237		
Déposant OTV SA		

1. Le présent rapport préliminaire international sur la brevetabilité (chapitre I) est établi par le Bureau international au nom de l'administration chargée de la recherche internationale selon la règle 44bis.1.a).

2. Ce RAPPORT comprend un total de 7 feuilles, y compris la présente feuille de couverture.

Dans les feuilles jointes, toute référence à l'opinion écrite de l'administration chargée de la recherche internationale doit être entendue, à la place, comme une référence au rapport préliminaire international sur la brevetabilité (chapitre I).

3. Le présent rapport contient des indications relatives aux points suivants :

- | | | |
|-------------------------------------|---------------|---|
| <input checked="" type="checkbox"/> | Cadre n° I | Base de l'opinion |
| <input checked="" type="checkbox"/> | Cadre n° II | Priorité |
| <input type="checkbox"/> | Cadre n° III | Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle |
| <input type="checkbox"/> | Cadre n° IV | Absence d'unité de l'invention |
| <input checked="" type="checkbox"/> | Cadre n° V | Déclaration motivée selon l'article 35.2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration |
| <input type="checkbox"/> | Cadre n° VI | Certains documents cités |
| <input type="checkbox"/> | Cadre n° VII | Certaines irrégularités relevées dans la demande internationale |
| <input type="checkbox"/> | Cadre n° VIII | Certaines observations relatives à la demande internationale |

4. Le Bureau international communiquera le présent rapport aux offices désignés conformément aux règles 44bis.3.c) et 93bis.1 mais pas avant l'expiration du délai de 30 mois à compter de la date de priorité (règle 44bis.2), sauf si le déposant a présenté une requête expresse à cet égard en vertu de l'article 23.2).

Bureau international de l'OMPI 34, chemin des Colombettes 1211 Geneva 20, Switzerland no de télécopieur +41 22 740 14 35	Date d'établissement du présent rapport 12 June 2006 (12.06.2006)
	Fonctionnaire autorisé Athina Nickitas-Etienne no de téléphone : +41 22 338 89 95

PATENT COOPERATION TREATY

Translation

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

R8652WO

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/FR2004/001963

International filing date (day/month/year)

22.07.2004

Priority date (day/month/year)

04.08.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

OTV SA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/FR2004/001963

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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International application No.

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Box No. II Priority

1. ☒ The following document has not yet been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

WRITTEN OPINION OF THE
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International application No.

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-8

YES

Claims

NO

Inventive step (IS)

Claims 1-8

YES

Claims

NO

Industrial applicability (IA)

Claims 1-8

YES

Claims

NO

2. Citations and explanations:

- 1 The present notification makes reference to the following documents:

D1: WO 00/37369 A (ZENON ENVIRONMENTAL INC;
BEHMANN HENRY (CA); HUSAIN HIDAYAT (CA)) 29
June 2000 (2000-06-29)

D2: US 5 589 068 A (NIELSEN MARINUS K) 31
December 1996 (1996-12-31)

- 2 Document D1, which is considered to be the most relevant prior art, describes (see figure 2) a biological method for the treatment of water in a biological tank (see figure 1), inside which operation times and stoppage times for the aeration means are respectively alternated. The regulation of the aeration consists in: i) fixing a minimum time and a maximum time for aeration (T1 min, T1 max) and a minimum time and a maximum time for non-aeration (T2 min, T2 max), a high set value for redox potential. ii) continuously measuring the redox potential in the aeration tank, the aeration time T1 and the non-aeration time T2. iii) aerating when the redox value

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

remains greater than said high set value and when the measured aeration time T1 is less than the minimum time T1 min or when the redox value remains less than said high set value but the measured aeration time T1 is less than the maximum time T1 max.

The subject matter of independent claim 1 differs from D1 in that the continuous measurement of the nitrate concentration, a low set value of the nitrate concentration (SBNO3) and a high set value of the nitrate concentration (SHNO3) are introduced into the method, so that the tank is not aerated as long as the measured nitrate concentration remains less than said low set value SBNO3 and the measured non-aeration time T2 is less than the minimum time T2 min, or as long as the measured nitrate concentration remains greater than said low set value SBNO3 and the measured non-aeration time T2 has not reached the maximum time T2 max, and the tank is also aerated when the measured nitrate concentration remains greater than said high set value SHNO3 and the measured aeration time T1 is less than the minimum time T1 min or when the measured nitrate concentration remains less than said high set value SHNO3 but the measured aeration time T1 is less than the maximum time T1 max.

- 2.1 The subject matter of claim 1 is thus novel (PCT Article 33(2)).

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citations and explanations supporting such statement

The problem to be solved by the present invention can thus be considered to be that of implementing more effective regulation of the aeration.

- 2.2 The solution to this problem as proposed in claim 1 of the present application is considered to involve an inventive step (PCT Article 33(3)) because a method which introduces set values for the nitrate concentration, the redox potential and maximum and minimum periods of aeration and non-aeration makes it possible to correctly eliminate nitrates without this limiting the destruction of ammonia (see figure 8).

Document D2 describes the control, in a nitrification tank, of the amount of oxygen applied, as a function of the values for the nitrate concentration and the redox potential. D2 does not describe a method for controlling periods of aeration and non-aeration in a biological treatment tank.

It would not be possible for the person skilled in the art to modify the method described in D1 in order to arrive at the method which forms the subject matter of claim 1 without thereby involving an inventive step.

- 2.3 Claims 2-8 are dependent upon claim 1 and thus also satisfy, as such, the requirements of the PCT in respect of novelty and inventive step.